

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Revision of Part 15 of the Commission's)	ET Docket 98-153
Rules Regarding Ultra-Wideband)	
Transmission Systems;)	
Test Data Submitted By The NTIA Regarding)	
Potential Interference From Ultra-Wideband)	
Transmission Systems)	

REPLY COMMENTS OF AT&T WIRELESS SERVICES, INC.

Pursuant to the Commission's January 24, 2001 Public Notice, AT&T Wireless Services, Inc. ("AT&T") hereby submits its reply comments in the above-captioned proceeding on the National Telecommunications and Information Administration's ("NTIA's") test data regarding potential interference from Ultra-Wideband ("UWB") transmission systems and devices.^{1/} The comments confirm that it is far too early to draw any conclusions concerning the potential interference of UWB devices to existing services, and that the Commission should await additional test results before authorizing any additional use of UWB devices.

DISCUSSION

I. NTIA'S TEST RESULTS ARE ONLY A FIRST STEP IN THE PROCESS OF EVALUATING UWB INTERFERENCE

The comments demonstrate the vast range of issues relating to potential interference from UWB that remain unsettled even after NTIA's test results have been analyzed.^{2/} While NTIA's

^{1/} Public Notice, Comments Requested on Test Data Submitted by the National Telecommunications and Information Administration Regarding Potential Interference from Ultra-Wideband Transmission Systems, ET Docket No. 98-153, DA 01-171 (rel. Jan. 24, 2001).

^{2/} See, e.g., Sprint Supplemental Comments Regarding NTIA's UWB Analyses Reports at 4 ("the Commission's assumption that a bandwidth limited to 50 MHz should be adequate is not supported by the facts"); Comments of U.S. GPS Industry Council at 3-4 (NTIA defined UWB devices with a "loose label that . . . provides insufficient details on the interference threat that the

tests are valuable tools to assess the impact of UWB, they were limited to examination of only a few devices, which do not represent the full range of devices that would be used for the various UWB applications that have been suggested in this proceeding, they did not test numerous aspects of UWB emissions,^{3/} and they did not consider the effects of UWB on global positioning systems.^{4/} As Sirius Satellite observes, “NTIA’s tests really amount to a threshold inquiry rather than a comprehensive study of all existing or potential devices.”^{5/}

Even given their limitations, however, NTIA’s test results raise several substantial concerns. First, as many commenters observe, the results contradict the Commission’s previous conclusion that UWB devices do not cause aggregate interference problems.^{6/} In fact, NTIA’s results demonstrate that “the proliferation of UWB devices would pose a very real threat of harmful interference to existing systems in any band they overlay.”^{7/}

Second, it is already clear that the interference potential of UWB devices will vary greatly according to their specific nature, and thus, as Sirius Satellite notes, “a one-size-fits-all rule will serve neither UWB proponents nor licensed spectrum users.”^{8/} For example, Sprint points out that although NTIA suggests that potential interference would be minimized by an

broad range of devices meeting this definition would pose to operational services with millions of users if included in an overlay sharing proposal”).

^{3/} See, e.g., U.S. GPS Industry Council Comments at 4-6 (Among other problems, NTIA’s tests did not assess the impact of UWB emissions on the noise floor).

^{4/} In fact, NTIA’s testing of the effects of UWB on global positioning systems has been significantly delayed. In a report issued March 9, 2001, NTIA acknowledged that it has only been able to study two of the four types of GPS receivers it plans to test, and will need more time than anticipated to complete its study. See “NTIA Test Results Raise Questions About UWB Impact on GPS,” Communications Daily (March 12, 2001).

^{5/} Supplemental Comments of Sirius Satellite Radio Inc. at 2.

^{6/} See, e.g., Sprint Comments at 5-6; Comments of Lockheed Martin Corporation at 3.

^{7/} Comments of Aeronautical Radio, Inc. and the Air Transport Association of America, Inc. at 3.

^{8/} Sirius Satellite Comments at 2; see also Comments of U.S. GPS Industry Council at 2 (UWB is an “umbrella term” covering a wide range of devices with varying interference potential).

“indoor reduction factor,” this solution would not be appropriate for PCS, MMDS and other licensees that provide services indoors.^{9/} The Commission cannot draw any conclusions concerning UWB interference until tests have established when and under what circumstances particular UWB devices may cause interference to the full range of existing licensees.

AT&T agrees with Sprint that the Commission also must fully consider the effects of UWB devices on the nation’s 3G policy.^{10/} Although it is AT&T’s understanding that the Commission has excluded the use of UWB technology in high power communications systems from consideration in this proceeding,^{11/} AT&T concurs with the commenters who observe that use of UWB for those purposes would likely cause significant interference to existing communications systems, and would weaken carriers’ ability to offer 3G services.^{12/} Further, in addition to the technical issues discussed in this proceeding, the use of UWB technology to offer telecommunications services would raise substantial legal concerns. These issues must be explored fully in an appropriate proceeding before the Commission can authorize any UWB devices for use in telecommunications.

Because of the range of questions that remain unanswered regarding UWB interference, AT&T supports proposals that the Commission issue a further notice of proposed rulemaking

^{9/} Sprint Comments at 7-8.

^{10/} Sprint Comments at 8-9.

^{11/} See In the Matter of Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems, Notice of Proposed Rulemaking, 15 FCC Rcd 12086 ¶ 19 (2000):

[w]e recognize that UWB technology may be developed for higher power applications such as wide-area mobile radio services. However, we find that such applications raise many new and novel questions, such as consistency with the international and domestic table of frequency allocations, and how such services might be licensed to share spectrum across broad frequency ranges used by multiple existing services and licensees. We observe that there is insufficient information in the record to address such issues. Accordingly, we are not making any proposals at this time to allow high power UWB devices to operate under Part 15 or on a licensed basis.”

^{12/} See Sprint Comments at 8; US GPS Industry Council Comments at 4; 6-8.

prior to implementing any regulations approving use of UWB devices. As Lockheed Martin observes:

Significant test data is being submitted to the FCC and being placed on public notice on a rolling basis. While this provides interested parties with an opportunity to submit comments on the individual tests on a piecemeal basis, it does not provide interested parties with any insight as to how the Commission is piecing together these comments to form the basis of a comprehensive regulatory framework, let alone an opportunity to comment on such a comprehensive framework.^{13/}

The Commission should issue a further notice to “ensure that all interested parties are given a fair and necessary opportunity to assess any rules and regulations” that the Commission plans to establish.^{14/}

II. UWB USERS SHOULD BE LICENSED TO MINIMIZE THE RISKS OF INTERFERENCE

Many commenters demonstrate that given the substantial uncertainties associated with UWB technology and the serious risk that such devices will interfere with existing operations, it is imperative that the Commission control such interference and retain accountability for disruption to existing operations by requiring UWB technology users to obtain licenses from the Commission.^{15/} NTIA’s test results confirm that the existing Part 15 regulations are not sufficient to serve this purpose.^{16/} At a minimum, UWB device use should be coordinated, so

^{13/} Lockheed Martin Comments at 5. See also Response of Cingular Wireless LLC at 4 (“the Commission should commence a further notice of proposed rulemaking with specific rule proposals keyed to the test results”); U.S. GPS Industry Council Comments at 8.

^{14/} Lockheed Martin Comments at 5.

^{15/} See Lockheed Martin Comments at 4 (“[w]ith the potential for rapid proliferation of UWB devices, it would be a costly mistake to the nation to later find that vital government and commercial services were disrupted by these devices with no way to identify, control, or rectify the harmful interference”); U.S. GPS Industry Council Comments at 6-7; Cingular Comments at 2-3 (unlicensed operation is “unnecessary and unwise” and “would be disastrous when and if there are interference problems, because there would be no central repository of information concerning who has the devices and is using them, and no ready method for tracking usage or compiling interference data”).

^{16/} See Lockheed Martin Comments at 3 (“[NTIA’s] findings add new and compelling evidence that UWB technology presents a challenge to spectrum managers much greater than that of the typical Part 15 device.”)

that the Commission can track who is using the devices and where, can require UWB device use to avoid causing interference, and can identify any interference that occurs.^{17/}

CONCLUSION

For the above reasons, the Commission should refrain from implementing any rules permitting the use of UWB devices until further information concerning the potential interference of such devices to existing services is obtained.

Respectfully submitted,

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^{17/} See Cingular Comments at 3.

CERTIFICATE OF SERVICE

I, Margo Adams, hereby certify that on this 12th day of March, 2001, a copy of the foregoing "Reply Comments of AT&T Wireless Services, Inc." was sent first class mail, postage prepaid, or by hand delivery(*) to the following:

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